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HAYASHI HIROTO**(54) **COOLING STRUCTURE OF MOTOR**

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(57) Abstract:

PROBLEM TO BE SOLVED: To provide a cooling structure of a motor, which has sufficiently high cooling efficiency and is capable of attaining easy processing.

SOLUTION: A motor 1 mainly consists of a shaft 8, a rotor 2, a stator 3, and a frame 4. The motor 1 runs as a result of the rotor 2 and the shaft 8 fixed to the rotor 2 rotating by passing current through a coil wound around the stator 3. The shaft 8 is hollow, of which inner periphery is provided with a spiral fin 16 inserted. The fin 16, formed in a single body, is constituted of a material with high thermal conductivity. When fluid is guided into the shaft 8, therefore, the contact area between refrigerant and the inner periphery of the shaft 8 can be increased without need for processing inside the shaft 8 with a machine tool or the like (without causing a cost increase). It is thus attainable of highly efficient heat exchange between the shaft 8 and the refrigerant.

